

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (cancelled)
2. (currently amended) A data reproduction apparatus according to claim [[1]] 6, wherein said data reproduction circuit includes a read/write amplifier circuit for interfacing a record signal from said recording medium, a waveform processing circuit for processing data from said read/write amplifier circuit, and a data decision circuit for reproducing data from said waveform processing circuit.
3. (cancelled)
4. (currently amended) A data reproduction apparatus according to claim [[3]] 7, further comprising:
 - a first unit including said synchronization information detection circuit and said data reproduction circuit; and
 - a second unit including said block end position calculation circuit and said data processing circuit;wherein said synchronization information detection signal is sent from said first

unit to said second unit and said data is sent from said first unit to said second unit after said synchronization information detection signal has been sent.

5. (currently amended) A data reproduction apparatus according to claim [[3]] 6, further comprising:

a first unit including said synchronization information detection circuit and said data reproduction circuit; and

a second unit including said block end position calculation circuit and said data processing circuit;

wherein said synchronization information detection signal and said data are sent from said first unit to said second unit and said calculated block end position is notified from said second unit to said first unit.

6. (currently amended) A data reproduction apparatus comprising:

a synchronization information detection circuit for detecting synchronization information of a block to be reproduced from a recording medium in which a series of data string having said synchronization information added thereto is recorded as a block to produce a synchronization information detection signal;

a block end position calculation circuit for calculating an end position of said block on said recording medium on a basis of said synchronization information detection signal;

a data reproduction circuit for reading out data recorded from said detected synchronization information to said calculated end position of said block from said

recording medium to reproduce the data:

a data processing circuit for processing data produced from said data reproduction circuit after elapse of a reproduction delay time on the basis of said synchronization information detection signal;

a first unit including said synchronization information detection circuit and said data reproduction circuit; and

a second unit including said block end position calculation circuit and said data processing circuit,

wherein said synchronization information detection signal is sent from said first unit to said second unit and said data is sent from said first unit to said second unit after said synchronization information detection signal has been sent and

~~A data reproduction apparatus according to claim 4,~~ wherein said synchronization information detection signal and said data are sent from said first unit to said second unit through the same signal line and when synchronization information of a second block continuing to a first block is detected while said data reproduction circuit ~~[[procedures]]~~ produces a data string of said first block, outputting of the data string of said first block is temporarily reserved and after said synchronization information detection circuit detects said synchronization information of said second block or after a predetermined time elapses from the time that said synchronization information is not detected, the outputting of the data string of said first block is resumed.

7. (currently amended) A data reproduction apparatus comprising:

a synchronization information detection circuit for detecting synchronization

information of a block to be reproduced from a recording medium in which a series of data string having said synchronization information added thereto is recorded as a block to produce a synchronization information detection signal;

a block end position calculation circuit for calculating an end position of said block on said recording medium on a basis of said synchronization information detection signal;

a data reproduction circuit for reading out data recorded from said detected synchronization information to said calculated end position of said block from said recording medium to reproduce the data; and

a data processing circuit for processing data produced from said data reproduction circuit after elapse of a reproduction delay time on the basis of said synchronization information detection signal;

~~A data reproduction apparatus according to claim 3, further comprising:~~

a data range prescribing circuit for producing a data settling signal indicative of a range of data produced from said data reproduction circuit;

a first unit including said synchronization information detection circuit, said data reproduction circuit and said data range prescribing circuit; and

a second unit including said block end position calculation circuit and said data processing circuit;

wherein said synchronization information detection signal is sent from said first unit to said second unit and said data and said data settling signal are sent from said first unit to said second unit after said synchronization information detection signal has been sent.

8. (currently amended) The ~~[[A]]~~ data reproduction apparatus according to claim 6, further comprising:

a format control circuit for activating a reading command signal for commanding to read a block to be reproduced on a recording medium in which a plurality of blocks are recorded as a block unit having a data string including:

bit synchronization information for performing bit synchronization;

symbol synchronization information for performing symbol synchronization;

data;

correction information for correcting said data; and

~~additional area; and calculating an end position of said block on said recording medium on the basis of a synchronization information detection signal to inactive said reading command signal; wherein~~

~~[[a]]~~ said synchronization information detection circuit ~~[[for reading]]~~ reads a block on said recording medium during a period that said reading command signals is active and detects ~~detecting~~ said symbol synchronization information to produce said synchronization information detection signal;

~~[[a]]~~ said data reproduction circuit ~~[[for reproducing]]~~ reproduces said data and said correction information of said block read out from said ~~[[sais]]~~ recording medium during the period that said reading command signal is active on the basis of said synchronization information detection signal to be produced; ~~and~~

~~a data processing circuit for processing said data and said correction information produced from said data reproduction circuit after elapse of a reproduction delay time on~~

~~the basis of said synchronization information signal.~~

9. (currently amended) [[A]] The data reproduction apparatus according to claim 6, further comprising:

~~a synchronization information detection circuit for detecting synchronization information detection of a block to be produced from a recording medium in which a series of data string having synchronization information added thereto is recorded as a block to produce a synchronization information detection signal;~~

a code reproduction circuit for reproducing a code string on the basis of said synchronization information detection signal to be produced; and

a decoding circuit for decoding said code string produced from said code reproduction circuit on the basis of said synchronization information detection signal;

wherein after said synchronization information detection signal is produced, said code string is processed by said decoding circuit.

10. (currently amended) [[A]] The data reproduction apparatus according to claim 6, further comprising:

a data string production circuit for producing a series of data string having said synchronization information added thereto;

a recording circuit for recording said data string in a recording medium as a record data string; and

a control circuit for controlling said data string production circuit and said recording circuit independently;

wherein said control circuit controls said recording circuit and produces said record data string after said data string of said data string production circuit is produced.

11. (currently amended) A data reproduction apparatus according to claim 10, further comprising:

a [[first]] third unit including said data string production circuit and said control circuit; and

a [[second]] fourth unit including said recording circuit;

wherein said data string and a control signal for controlling said recording circuit by means of said control circuit are sent from said third [[first]] unit to said fourth [[second]] unit and said data string is produced in advance.

12. (currently amended) The [[A]] data reproduction apparatus according to claim 6, further comprising:

a data production circuit for sending out said data;

a coding circuit for coding said data;

a data string production circuit for adding synchronization information to said coded data to produce a data string;

a recording circuit for recording said data string as a record data string; and

format control circuit for controlling said data string production circuit [[ans]] and said recording circuit independently;

wherein said format control circuit controls said recording circuit and produces said records data string after when said data string of said data string production circuit is

produced.

13. (new) A data reproduction apparatus according to claim 6, further comprising:

a data range prescribing circuit for producing a data settling signal indicative of a range of data produced from said data reproduction circuit;

a first unit including said synchronization information detection circuit, said data reproduction circuit and said data range prescribing circuit; and

a second unit including said block end position calculation circuit and said data processing circuit;

wherein said synchronization information detection signal is sent from said first unit to said second unit and said data and said data settling signal are sent from said first unit to said second unit after said synchronization information detection signal has been sent.

14. (new) A data reproduction apparatus according to claim 7, wherein said data reproduction circuit includes a read/write amplifier circuit for interfacing a record signal from said recording medium, a waveform processing circuit for processing data from said read/write amplifier circuit, and a data decision circuit for reproducing data from said waveform processing circuit.

15. (currently amended) A data reproduction apparatus according to claim 7, further comprising:

a first unit including said synchronization information detection circuit and said

data reproduction circuit; and

a second unit including said block end position calculation circuit and said data processing circuit;

wherein said synchronization information detection signal and said data are sent from said first unit to said second unit and said calculated block end position is notified from said second unit to said first unit.

16. (new) A data reproduction apparatus according to claim 15, wherein said synchronization information detection signal and said data are sent from said first unit to said second unit through the same signal line and when synchronization information of a second block continuing to a first block is detected while said data reproduction circuit procedures produces a data string of said first block, outputting of the data string of said first block is temporarily reserved and after said synchronization information detection circuit detects said synchronization information of said second block or after a predetermined time elapses from the time that said synchronization information is not detected, the outputting of the data string of said first block is resumed.

17. (new) The data reproduction apparatus according to claim 7, further comprising:

a format control circuit for activating a reading command signal for commanding to read a block to be reproduced on a recording medium in which a plurality of blocks are recorded as a block unit having a data string including:

bit synchronization information for performing bit synchronization;

symbol synchronization information for performing symbol synchronization;
data;

correction information for correcting said data; and

additional area; wherein

said synchronization information detection circuit reads a block on said recording medium during a period that said reading command signals is active and detects said symbol synchronization information to produce said synchronization information detection signal;

said data reproduction circuit reproduces said data and said correction information of said block read out from said recording medium during the period that said reading command signal is active on the basis of said synchronization information detection signal to be produced.

18. (new) The data reproduction apparatus according to claim 7, further comprising:

a code reproduction circuit for reproducing a code string on the basis of said synchronization information detection signal to be produced; and

a decoding circuit for decoding said code string produced from said code reproduction circuit on the basis of said synchronization information detection signal;

wherein after said synchronization information detection signal is produced, said code string is processed by said decoding circuit.

19. (new) The data reproduction apparatus according to claim 7, further

comprising:

a data string production circuit for producing a series of data string having said synchronization information added thereto;

a recording circuit for recording said data string in a recording medium as a record data string; and

a control circuit for controlling said data string production circuit and said recording circuit independently;

wherein said control circuit controls said recording circuit and produces said record data string after said data string of said data string production circuit is produced.

20. (new) A data reproduction apparatus according to claim 19, further comprising:

a first unit including said data string production circuit and said control circuit;
and

a second unit including said recording circuit;

wherein said data string and a control signal for controlling said recording circuit by means of said control circuit are sent from said first unit to said second unit and said data string is produced in advance.

21. (new) The data reproduction apparatus according to claim 7, further comprising:

a data production circuit for sending out said data;

a coding circuit for coding said data;

Application No. 09/638,607
Amendment Dated October 21, 2010
Reply to Office Action Dated April 11, 2002

a data string production circuit for adding synchronization information to said coded data to produce a data string;

a recording circuit for recording said data string as a record data string; and

format control circuit for controlling said data string production circuit and said recording circuit independently;

wherein said format control circuit controls said recording circuit and produces said records data string after when said data string of said data string production circuit is produced.